SEQUENCE LISTING

(1) GENERAL INFORMATION

(i) APPLICANT: Lemieux, Bertrand
                Landry, Benoit S.
                Sapolsky, Ronald J.

(ii) TITLE OF THE INVENTION: Brassica Polymorphisms

(iii) NUMBER OF SEQUENCES: 173

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(v) COMPUTER READABLE FORM:
    (A) MEDIUM TYPE: Diskette
    (B) COMPUTER: IBM Compatible
    (C) OPERATING SYSTEM: DOS
    (D) SOFTWARE: FastSEQ for Windows Version 2.0

(vi) CURRENT APPLICATION DATA:
    (A) APPLICATION NUMBER: 08/813,507
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    (A) APPLICATION NUMBER: US 60/032,069
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    (2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

TCAAAACTAA TATTTCTTTT GTTGATTGGT AATAAACAGG T   41

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

TCAAAACTAA TATTTCTTTT CTTGATTGGT AATAAACAGG T   41

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

TTGATTATAW AGAAAACAAC   20

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

TTGATTATAW AGAAAAGAAC   20

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

TGATTATAAW GAAAACAACT   20

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

TGATTATAAW GAAAGAACT   20

(2) INFORMATION FOR SEQ ID NO:7:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

GATTATAAAS AAAACAACTA   20

(2) INFORMATION FOR SEQ ID NO:8:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

GATTATAAAS AAAAGAACTA   20

(2) INFORMATION FOR SEQ ID NO:9:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

ATTATAAAGW AAACAACTAA   20

(2) INFORMATION FOR SEQ ID NO:10:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

ATTATAAAGW AAAGAACTAA   20

(2) INFORMATION FOR SEQ ID NO:11:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

TTATAAAGAW AACAACTAAC   20

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

TTATAAAGAW AAGAACTAAC   20

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

TATAAAGAAW ACAACTAACC   20

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

TATAAAGAAW AGAACTAACC   20

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

ATAAAGAAAW CAACTAACCA   20

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

ATAAAGAAAW GAACTAACCA   20

(2) INFORMATION FOR SEQ ID NO:17:

   (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

TAAAGAAAAS AACTAACCAT   20

(2) INFORMATION FOR SEQ ID NO:18:

   (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

AAAGAAAACW ACTAACCATT   20

(2) INFORMATION FOR SEQ ID NO:19:

   (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

AAAGAAAAGW ACTAACCATT   20

(2) INFORMATION FOR SEQ ID NO:20:

   (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

AAGAAAACAW CTAACCATTA   20

(2) INFORMATION FOR SEQ ID NO:21:

   (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 20 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

AAGAAAAGAW CTAACCATTA   20

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

AGAAAACAAS TAACCATTAT   20

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

AGAAAAGAAS TAACCATTAT   20

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

GAAAACAACW AACCATTATT   20

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

GAAAAGAACW AACCATTATT   20

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

AAAACAACTW ACCATTATTT   20

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

AAAAGAACTW ACCATTATTT   20

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

AAACAACTAW CCATTATTTG   20

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 20 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

AAAGAACTAW CCATTATTTG   20

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 42 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

AGCAAGCTTA CATGCGTGGA RWGAGAGTCC TCGAGATCAA CC   42

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

CCTTGATCTC TCAAGTAATC RTCTCACCGG AAGATCCCTG A   41

(2) INFORMATION FOR SEQ ID NO:32:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

ACCATCCATT AAACTGTATC RTCGCAATCT AACCAAAAGT T   41

     (2) INFORMATION FOR SEQ ID NO:33:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

TAAAGCAAAG AGAGTCTTAC MGTCTGCTGC ATGATATACC C   41

     (2) INFORMATION FOR SEQ ID NO:34:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

CTACTGATAG TGAACCACCC MATCCCCAAA TTTAAAGCAA A   41

     (2) INFORMATION FOR SEQ ID NO:35:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

ATCCTATTGG TAGTAACACA RATTGAGTTA ATGTTGCAGG G   41

     (2) INFORMATION FOR SEQ ID NO:36:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

AGGCAAAGCG GTAGTTGCAA RACTGCTTCT CACGAGGTAA T   41

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

CCAGCTTCAA TGTCTGCATG MTTGTGTCGA TGCCAAAGTT C   41

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

AAAGTTCATT ACGATGATCT RACCCTGCAG TCATCCATGG A   41

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

CTTCCCCCCC TCAATACCTC KTTCAAAAGT GAAAAGTGCA G   41

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

ATTTTGTTTT GTTTCTTGTC SGGTCAGGTC AGAACAAAGT T   41

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(ix) FEATURE:
  (A) NAME/KEY: variation
  (B) LOCATION: replace(21, "")
  (D) OTHER INFORMATION: /note= "deletion polymorphism"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

AAACCAGAGC CACCTCCTTA CCCACCTCAT CGTTTCCTTT C   41

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

GATTTCGACC GCAGTCTCAC KGAGGATGAG TATATCGCTT T   41

(2) INFORMATION FOR SEQ ID NO:43:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

TAGGACAGGC AAACAATCTA MGCGGTCAAA ATCCGATTTC G   41

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

ACTCAAAAAA ACGATACCTC SGCCGTCTCT CGCCGTCTCG C   41

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 42 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(ix) FEATURE:
  (A) NAME/KEY: variation
  (B) LOCATION: replace(21, "")
  (D) OTHER INFORMATION: /note= "deletion polymorphism"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

CAGGAGACAG TTACAGTCCC ACAGAGTCGC AAGGATCTCG AA   42

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 41 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

CTGATCTTGA AGGAGAGACC RCCACAAGGT TCCATCCTAT G   41

(2) INFORMATION FOR SEQ ID NO:47:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 41 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

AGTGCGAGGC TCAGTTGGAT KATTAGGGTG TCAGTAAATC A   41

(2) INFORMATION FOR SEQ ID NO:48:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 41 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

NAGGTCCATG ATGATGACAA WAAAGGTATT CCACATGTCA A   41

(2) INFORMATION FOR SEQ ID NO:49:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 41 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

ACATCCAACT TTTCTCCAGT YCTTTATTCT ATCCTGATTT G   41

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 41 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

AAGGTATTCC ATTGGTATAC MTCCAACTTT TCTCCAGTTC T   41

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

GACCTTCTTG GGAAAGAAAG YTGTAACCGC GTCGAGATTC G   41

(2) INFORMATION FOR SEQ ID NO:52:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

ATAGAAACCG CCGATGCTCA AGGACACGCC ACCGTCTTCG T   41

(2) INFORMATION FOR SEQ ID NO:53:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

CACTTTCTTC GTGGCTAAAT TCTTCGGCCG AGCCGGTCTC A   41

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

GTTATCATCA GTACCGGTAT TAACCCCAAG GCTAATTCTT A   41

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

TTGGGTATCT ACGGACTGAT CATCGCTGTT ATCATCAGTA C   41

(2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

GGAATTCAAT ACTCGCCAAC KTCTTCATTG CTGTCGTCGG C   41

(2) INFORMATION FOR SEQ ID NO:57:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

TCCTTACGCC TTCAAGCGCA SCGGCTGGCT CATGGGTGTC C   41

(2) INFORMATION FOR SEQ ID NO:58:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

TGTATCTATG CGGTGGCTGC SGTCTCCGTT CGCGCCAGTA C   41

(2) INFORMATION FOR SEQ ID NO:59:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

GCGCCAGTAC CGCCGGTTAC AATCTCACTG CCTTCACGTC C   41

(2) INFORMATION FOR SEQ ID NO:60:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

GCGCCAGTAC CGCCGGTTAC RATCTTAATG CCTTCACGTT C   41

(2) INFORMATION FOR SEQ ID NO:61:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

AACTTGGAAT TCCACAACTT SAGAAACTTC GATGTGGTGC C   41

(2) INFORMATION FOR SEQ ID NO:62:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

CGGTACTGCG AAAGCTGGAG SATCAACTTG GAATTCCACA A   41

(2) INFORMATION FOR SEQ ID NO:63:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

AAAAGTGCTA TTGTTCAGGT GGATGCTGCT CCGTTCAAGC A   41

(2) INFORMATION FOR SEQ ID NO:64:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

GTCAAAAGCC ACGGATTCAA RAACGTGCTC TTCTTGCGCC T   41

(2) INFORMATION FOR SEQ ID NO:65:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (ix) FEATURE:
     (A) NAME/KEY: variation
     (B) LOCATION: replace(21, "")
     (D) OTHER INFORMATION: /note= "deletion polymorphism"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

AAACCAGGGT CCTTGATGTG TGTCTACAAC GCTTCCAACA A   41

(2) INFORMATION FOR SEQ ID NO:66:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

AANACCCTGA GCTCATGCCT YTGACCCATG TTCTTGCCAC C   41

(2) INFORMATION FOR SEQ ID NO:67:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

TTTGGGACCG TTGGAGTTGC RTCTGCGGCT ATGACGGTGG A   41

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

AATCTTTGCC ATTGCTGTCA RTATCTTCGT CAGCTTCAGC T   41

(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

GACAACGCTG GTGGTATTGC YGAAATGGCT GGAATGAGCC A   41

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

GCTGCTCTAG GGATGCTCAG YACCATCGCC ACCGGTTTGG C   41

    (2) INFORMATION FOR SEQ ID NO:71:

    (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

ATGCTCAGCA CCATCGCCAC YGGTTTGGCG ATTGATGCTT A   41

    (2) INFORMATION FOR SEQ ID NO:72:

    (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

GAGAAAGTGC TTGTGGAGAT YTACAAGTCC ATACTGATGG C   41

    (2) INFORMATION FOR SEQ ID NO:73:

    (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

AATGCTTGTG GAGATTTACA RGTCCATACT GATGGCGCAG G   41

    (2) INFORMATION FOR SEQ ID NO:74:

    (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

AATGCTTGTG GAGATCTACA RGTCCATACT GATGGCGCAG G   41

    (2) INFORMATION FOR SEQ ID NO:75:

    (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 41 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

AATGATTGGT TTGAGAAGCA WACAGCTGGT ACGCTTGATA T   41

(2) INFORMATION FOR SEQ ID NO:76:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

GATAGGGCGA AGAGAGGGAA RAGTCCTGAG AGGAAAGAGA T   41

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

CTCTCTCTCC ACAAAGACAC MGCTTTCTCC ATGACCTTCG G   41

(2) INFORMATION FOR SEQ ID NO:78:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

TCTCTGACGT CATGAAAGCT MATGGCAAAA TTGCTGATGG A   41

(2) INFORMATION FOR SEQ ID NO:79:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

GTTATCGATC GCGTGGTCCG YGAAACCCAA AATACACCTT T   41

(2) INFORMATION FOR SEQ ID NO:80:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

GTTATCGATC GCGTGGTCCG YGAAACCCAA AATTCACCTT T   41

(2) INFORMATION FOR SEQ ID NO:81:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

CGTCAGCCTT CTTCCGCCGC MGTCGTCCTC CGCAACCGTG C   41

(2) INFORMATION FOR SEQ ID NO:82:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

TGTCTCTTCC GTCAGCCTTC YTCCGCCGCA GTCGTCCTCC G   41

(2) INFORMATION FOR SEQ ID NO:83:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

TGTCTCTTCC GTCAGCCTTC YTCCGCCGCC GTCGTCCTCC G   41

(2) INFORMATION FOR SEQ ID NO:84:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(ix) FEATURE:
   (A) NAME/KEY: variation
   (B) LOCATION: replace(21, "")
   (D) OTHER INFORMATION: /note= "deletion polymorphism"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

TCAGGTTTAC CTCTATATAT TATATTTCAT GGTATGAAGG T   41

(2) INFORMATION FOR SEQ ID NO:85:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

TATCCTGCAA ATTGACATTT YCCTTCAGGT TCTAGAAGCT G   41

(2) INFORMATION FOR SEQ ID NO:86:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (ix) FEATURE:
    (A) NAME/KEY: variation
    (B) LOCATION: replace(21, "")
    (D) OTHER INFORMATION: /note= "deletion polymorphism"

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

CGAGAACAGA AGAGAAGAGA CTGGAACACG TCGGACAGTA C   41

(2) INFORMATION FOR SEQ ID NO:87:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

ACGGGTCCTA GCGCCATGGC TATTTTCCTC ACCGTTTCTG G   41

(2) INFORMATION FOR SEQ ID NO:88:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

TTGGGCTTTC GGTGGTATGA TCTTCGTCCT CGTCTATTGC A   41

(2) INFORMATION FOR SEQ ID NO:89:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

TCCTTGATTC CTTAATAATC WTTGGCTGGG GGTCTTTCTA A   41

     (2) INFORMATION FOR SEQ ID NO:90:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

GCTTGAATAA CGATGTCTAC TCTGCCTCGG CGTACGGCGG A   41

     (2) INFORMATION FOR SEQ ID NO:91:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

CTAAAAAGAT CGACGAGTGT CCCTTACTAC GCTCCATCTA T   41

     (2) INFORMATION FOR SEQ ID NO:92:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

AGGTGGGTTT AGCGTGGCAT CCGATCCATT GGATGGATCC A   41

     (2) INFORMATION FOR SEQ ID NO:93:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

NGTGGGTTTA CCGTATCATT TGATCCATTG GATGGATCGA G   41

     (2) INFORMATION FOR SEQ ID NO:94:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

GCGGATCCTA TATTGGGTCT TGATGGATTG TTTCTATCCC G   41

(2) INFORMATION FOR SEQ ID NO:95:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

TATCCTGCAA ATTGACATTT CCCTTCAGGT TCTAGAAGCT G   41

(2) INFORMATION FOR SEQ ID NO:96:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

TACCACGGTC GTACTGGTCG ATGTCTGGAA CGTCACCAAG C   41

(2) INFORMATION FOR SEQ ID NO:97:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:

CTGTCTCAGT TTGTTGGATC SAAATCGAAT CGAAAGCGTA C   41

(2) INFORMATION FOR SEQ ID NO:98:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:

CTGTCTCAGT TTGTTGGATC SAAATCAAAT CGAAAGCGTA C   41

(2) INFORMATION FOR SEQ ID NO:99:

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:

ACACTGTTGG AGGACGTGAA GAAGATATTC AAGACAACAT C   41

    (2) INFORMATION FOR SEQ ID NO:100:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:

TCTTTCGTAT CTTGCTGAGT YGTTACGCCT GTCAACACCC G   41

    (2) INFORMATION FOR SEQ ID NO:101:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:

GGAACCCTAG GGAGCCCACA GCTCCTTATG CTAAGCGGCG T   41

    (2) INFORMATION FOR SEQ ID NO:102:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:

GATCATAGTA TCCGCCGGAA CCCTAGGGAG CCCACAGCTC C   41

    (2) INFORMATION FOR SEQ ID NO:103:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

TTCGGCGGGT CGATCCGGGC RGAAGACATT GTCAGGTGAN N   41

    (2) INFORMATION FOR SEQ ID NO:104:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:

GCACCAACAT TGTAAACCTA KAGCTTCTTC CTCAGCCACC T   41

(2) INFORMATION FOR SEQ ID NO:105:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:

GCTGCCACAT AGTGAACCTA WAGCTTCTTC CTCAGCCACC T   41

(2) INFORMATION FOR SEQ ID NO:106:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:

GCACCAACAT TGTGAACCTA RAGCTTCTTC CTCAGCCACC T   41

(2) INFORMATION FOR SEQ ID NO:107:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:

AGTACATAGC TATTGACTAA STTAAGTTCC TTGTATTGTT G   41

(2) INFORMATION FOR SEQ ID NO:108:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:108:

CCTCTATCCG CCATGGTTGC WCCAACATTG TGAACCTAGA G   41

(2) INFORMATION FOR SEQ ID NO:109:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:

TTGACCCTCG GCAAGCCACC KGTCAAGCCA TGCTGCAGCC T   41

     (2) INFORMATION FOR SEQ ID NO:110:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:

AGGCTGCCCT CTCCCAATTC MAAAGCCAAC TCCTAAACCA A   41

     (2) INFORMATION FOR SEQ ID NO:111:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (ix) FEATURE:
    (A) NAME/KEY: variation
    (B) LOCATION: replace(21, "")
    (D) OTHER INFORMATION: /note= "deletion polymorphism"

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:

AAACATGGAA AGGCCTGATA GTCACCGTCA AGCTCACCGT C   41

     (2) INFORMATION FOR SEQ ID NO:112:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:112:

CAACCTGAAA AATTGTTTTA MCAACGGCCC CGCTTTCTCC A   41

     (2) INFORMATION FOR SEQ ID NO:113:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:113:

AAGGCCAACA ACGACATTAC CTCCATCGTT AGCAACGGAG G   41

(2) INFORMATION FOR SEQ ID NO:114:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:114:

TCACCGGCTT GAAGTCTTCC KCTGCATTCC CAGTCACCCG C   41

(2) INFORMATION FOR SEQ ID NO:115:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(ix) FEATURE:
   (A) NAME/KEY: variation
   (B) LOCATION: replace(21, "")
   (D) OTHER INFORMATION: /note= "deletion polymorphism"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:115:

ACTCAGCTTT CTTATGCCTC GACTTGCGAC ACACGAATCC A   41

(2) INFORMATION FOR SEQ ID NO:116:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:116:

TGCGGCTAAC ATCTCTGGTG KTCACCTTAA CCCAGCCGTA N   41

(2) INFORMATION FOR SEQ ID NO:117:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:117:

CGAGGATCAC TTCTCTCTGT KCAAGAAGAA GTTCGGCAAG G   41

(2) INFORMATION FOR SEQ ID NO:118:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:118:

CTGTTCAAGA AGAAGTTCGG YAAGGTCTAC GCTTCCCGCG A   41

      (2) INFORMATION FOR SEQ ID NO:119:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:119:

CCCTCTGCTC GTCACGGCGT WACGCAGTTC TCGGATCTGA C   41

      (2) INFORMATION FOR SEQ ID NO:120:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:120:

CCCGCGAGGA GCACGACTAC WGATTCTCCG TTTTCAAATC C   41

      (2) INFORMATION FOR SEQ ID NO:121:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:121:

TCCACTCGCC GGGAAGAAAC TCGACAAACC GTTGTCTACT T   41

      (2) INFORMATION FOR SEQ ID NO:122:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:122:

ATGGCTCGCG ACGGGTCTCC GGTAAACCTC GGAGAGCAGA T   41

      (2) INFORMATION FOR SEQ ID NO:123:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

(ix) FEATURE:
  (A) NAME/KEY: variation
  (B) LOCATION: replace(21, "")
  (D) OTHER INFORMATION: /note= "deletion polymorphism"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:123:

GCCGACTCTC GAAGCTTCTT AACTCCACTC GCCGGGAAGA A   41

    (2) INFORMATION FOR SEQ ID NO:124:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:124:

GAATCTAGGA GAGCAGATCT KCCTCTCTAT CTTCAATGTT C   41

    (2) INFORMATION FOR SEQ ID NO:125:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:125:

TCCACTCGCC GGGAAGAAAC YCGACAAACC GTTGTCTACA T   41

    (2) INFORMATION FOR SEQ ID NO:126:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:126:

GTCATGAAGA TATTCACTAC RCCGACTCTC GAAGCTTCTT A   41

    (2) INFORMATION FOR SEQ ID NO:127:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:127:

GCAGGTAAAA TTCTACAGAC MTTCCCTTTT CATTGTAGTT A   41

(2) INFORMATION FOR SEQ ID NO:128:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:128:

TCTCCTCCGC CGCGCAAGAA RAAATCGACA GCGGCGCGTC T   41

    (2) INFORMATION FOR SEQ ID NO:129:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:129:

GTGCCCTAAA GATACCCTCA RGCTTGGTGT CTGCGCTAAT G   41

    (2) INFORMATION FOR SEQ ID NO:130:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:130:

TTCTTCCCAC AGGTGAAACT TGCTAACTTC CTTCCAAAGT A   41

    (2) INFORMATION FOR SEQ ID NO:131:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 42 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:131:

TATGTATCAG GACAATGTGT KWGTGACTGT GGTTGCATCC AT   42

    (2) INFORMATION FOR SEQ ID NO:132:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:132:

GCTAAGCTAC GCAACTGCCA YCAATCAGGG CAAGCTAAAG G   41

(2) INFORMATION FOR SEQ ID NO:133:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:133:

TATACACTCT TTAAAAGCGT STGTGTGTAC CCATCTCTCT T   41

    (2) INFORMATION FOR SEQ ID NO:134:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:134:

ATGGCTGCGT ATTGGCTGTC YAAGGCTGGA TCTTGGTCCC A   41

    (2) INFORMATION FOR SEQ ID NO:135:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:135:

GGATCCATCT CAACTATGGT MGTATTATCG TTGAGGCTAG G   41

    (2) INFORMATION FOR SEQ ID NO:136:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (ix) FEATURE:
    (A) NAME/KEY: variation
    (B) LOCATION: replace(21, "")
    (D) OTHER INFORMATION: /note= "deletion polymorphism"

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:136:

GTATGTGATT CGGAAGAGAA TCAAACTAAG TGCCGAGAAA G   41

    (2) INFORMATION FOR SEQ ID NO:137:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 43 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:137:

GCTAAGGTAG TTGGAGGAGC SWRCCACAGC CACGCGACTA AGG   43

(2) INFORMATION FOR SEQ ID NO:138:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:138:

CTCAACGTAG CAAGTAATAA KATACTGTCT ATTTATGGTT A   41

(2) INFORMATION FOR SEQ ID NO:139:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:139:

AGACTTTCCC CATTCTCTTC WCCATCCACC GTCGAAACCC A   41

(2) INFORMATION FOR SEQ ID NO:140:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:140:

ACTTCGAAAC TGTAAACCTA WACTTTAAGA GTTTAGAGCT A   41

(2) INFORMATION FOR SEQ ID NO:141:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:141:

CACCATCGGA GAAAGAGGTA YTTCGAAACT GTAAACCTAA A   41

(2) INFORMATION FOR SEQ ID NO:142:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:142:

CTAAGGCGTC TCCTGAAGAA RTACAGAGAG TCGAAGAAGA T   41

    (2) INFORMATION FOR SEQ ID NO:143:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:143:

CCGCGGACGA CGCTTTCTTC MTCTGCTCCA CCGCGAGCGC C   41

    (2) INFORMATION FOR SEQ ID NO:144:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 42 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (ix) FEATURE:
      (A) NAME/KEY: variation
      (B) LOCATION: replace(21, "")
      (D) OTHER INFORMATION: /note= "deletion polymorphism"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:144:

GAGGAGTAGT CTCCATGGCC GAAGAAGAGC GTCGGAGACC TG   42

    (2) INFORMATION FOR SEQ ID NO:145:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:145:

GAAGTTAGGG CTTCTAAGAT YAAGTTCGGC AAGGCTTTAA C   41

    (2) INFORMATION FOR SEQ ID NO:146:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:146:

TCAAAACTAA TATTTCTTTT STTGATTGGT AATAAACAGG T   41

(2) INFORMATION FOR SEQ ID NO:147:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:147:

TTCCAGTGAA AAGGCATTGT KCTCCAAAAT CTCGCTCTGC G   41

    (2) INFORMATION FOR SEQ ID NO:148:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:148:

AAGCAGCTCT GACTTGAATG MGAGAGGTTA ATCAGACTGT G   41

    (2) INFORMATION FOR SEQ ID NO:149:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:149:

TAGATTGAAG CAATCAAGAA RATCTCAGAC TTCATCACCC A   41

    (2) INFORMATION FOR SEQ ID NO:150:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 42 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (ix) FEATURE:
    (A) NAME/KEY: variation
    (B) LOCATION: replace(21, "")
    (D) OTHER INFORMATION: /note= "deletion polymorphism"

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:150:

GCATCCAACT CCAAGGATGA CCCTGCCAAG GTGCTGCTAA CT   42

    (2) INFORMATION FOR SEQ ID NO:151:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 41 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:151:

GAGCTCAGGG ATGGTGGATC WGACTACCTT GGAAAGGGTG T   41

       (2) INFORMATION FOR SEQ ID NO:152:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:152:

TGGGGTTAGT CGAAATAGGT WAAATGCTTT GAGTATGTGT A   41

       (2) INFORMATION FOR SEQ ID NO:153:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:153:

TACGCGCAGC ACGGACTTGC RACGCAAGCA ATCGAGCTTT T   41

       (2) INFORMATION FOR SEQ ID NO:154:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:154:

GAAGCCCATG GTACGGAGCG RGAGAGAGTC AAGTACTTGG G   41

       (2) INFORMATION FOR SEQ ID NO:155:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:155:

AACGGGTCAC TGCTAAATCA WAAGGATCAC AAGGCTGGGA C   41

       (2) INFORMATION FOR SEQ ID NO:156:

     (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

(ix) FEATURE:
    (A) NAME/KEY: variation
    (B) LOCATION: replace(21, "")
    (D) OTHER INFORMATION: /note= "deletion polymorphism"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:156:

CTAGCCTACT TTGGGAAAAG TTTCGTTATT GTTTTGTGTG G   41

        (2) INFORMATION FOR SEQ ID NO:157:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:157:

GACTTCAAGG ACTTCGCCGG MAAATGCTCC GACGCTGTCA A   41

        (2) INFORMATION FOR SEQ ID NO:158:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:158:

GAGGAGGGCT ACATGCAGCT RAAGAGGCTG AGGGGGCTAA A   41

        (2) INFORMATION FOR SEQ ID NO:159:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:159:

GATGTTCAAC CTATGAAGAA SAAACACCGA GGACCAACGA G   41

        (2) INFORMATION FOR SEQ ID NO:160:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 41 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:160:

CCATTAGTGA GGGAGCATGT WCCTGTCACA TTTGATGATT G   41

(2) INFORMATION FOR SEQ ID NO:161:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 42 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:161:

AAACACATCG CCAAAGATCC MRACACTCGA GAAAGAGTGG AG   42

    (2) INFORMATION FOR SEQ ID NO:162:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:162:

CTCATAGGCG ATCTGGAGTA KGCAAATCGA ATCTCCTCTC C   41

    (2) INFORMATION FOR SEQ ID NO:163:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:163:

TGCACGCCTC ACTTGTTCCT WCCAATCTGA CATCAAGGAT T   41

    (2) INFORMATION FOR SEQ ID NO:164:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:164:

NGTGTTTTTG AGGTGAAAGC WACAAATGGA GATACCTTTT T   41

    (2) INFORMATION FOR SEQ ID NO:165:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 41 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:165:

CCCGAGCCAT TAGGACAAGA YGACTTGCCG TTTGACCAAA C   41

(2) INFORMATION FOR SEQ ID NO:166:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:166:

CCCATCTCAT CCTTTCTTGA RCCGTTGAAT CAAGCTCCTG G   41

(2) INFORMATION FOR SEQ ID NO:167:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:167:

TACATTCTCA TTGGTTGGTT MTTGGGAAAT AAAGTACCAA C   41

(2) INFORMATION FOR SEQ ID NO:168:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:168:

GCACGCGCTA GAGTTGTTGC CAGAAGGAAT GAACAATCTG A   41

(2) INFORMATION FOR SEQ ID NO:169:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:169:

CTTGAGACCT ATAGTCCTGT WGTTCGGTCC GCCACAGTTC G   41

(2) INFORMATION FOR SEQ ID NO:170:

(i) SEQUENCE CHARACTERISTICS:
   (A) LENGTH: 41 base pairs
   (B) TYPE: nucleic acid
   (C) STRANDEDNESS: single
   (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:170:

CACAGTTCGT ACAGTTCTTC MCATTGCCAC TGTTATGCAC T   41

(2) INFORMATION FOR SEQ ID NO:171:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:171:

GAAGGCGTCC ACTATCTTGA RACCTATAGT CCTGTTGTTC G   41

(2) INFORMATION FOR SEQ ID NO:172:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:172:

TCCCGGAAAT CTTGCTGAAA MCGTTTACCT GCGACAACCA G   41

(2) INFORMATION FOR SEQ ID NO:173:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 41 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:173:

ATGTCTTCAA AGTGCTCTGT TGCAACGCAC GTCCGAACAA G   41